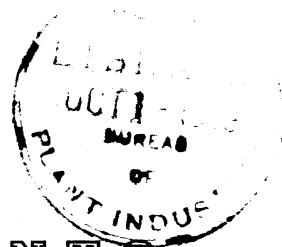


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PLANT IMMIGRANTS.

No. 160.

AUGUST, 1919.

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Foreign Seed and Plant Introduction.

EXPLANATORY NOTE.

This multigraphed circular is made up of descriptive notes furnished mainly by agricultural explorers and foreign correspondents relative to the more important introduced plants which have recently arrived at the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry of the Department of Agriculture, together with accounts of the behavior in America of previous introductions. Descriptions appearing here are revised and published later in the INVENTORY OF PLANTS IMPORTED.

Applications for material listed in these pages may be made at any time to this Office. As they are received they are placed on file, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it as well as to others selected because of their special fitness to experiment with the particular plants imported. Do not wait for the annual catalogue entitled NEW PLANT INTRODUCTIONS which will be sent you in the autumn and in which will be listed all plants available at that time. Regular requests checked off on the check list sent out with the catalogue are not kept over from year to year. If you are especially interested in some particular plant in the catalogue write and explain in detail your fitness to handle it.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.

David Fairchild,
Agricultural Explorer in Charge

*Office of Foreign Seed and Plant Introduction,
Bureau of Plant Industry,
U. S. Department of Agriculture.*

Issued August 28, 1919, Washington, D.C.

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of this circular should obtain permission by
applying to this Office.**

Acer campbellii (Aceraceae), 47629. **Maple.** From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. The principal maple of the northeastern Himalayas, where it grows at an altitude of 7,000 feet and more. The leaves are a beautiful green with red petioles. The grayish white, close-grained wood is moderately hard and is extensively used for planking and for tea boxes. The tree reproduces freely by seed or by coppice, and plays an important part in the regeneration of the hill forests. (Adapted from Watt, Dictionary of the Economic Products of India, vol. 1, p. 69.)

Actinidia kolomikta (Dilleniaceae), 47623. Grown at the Yarrow Plant Introduction Field Station, Rockville, Md., and numbered for convenience in distribution. "A large-growing, deciduous, ornamental climber, native to Amur, China, and Japan. The flowers are $\frac{1}{2}$ to $\frac{5}{8}$ of an inch in diameter, white with purple stamens, and are produced in abundance. The fruit is the size of a gooseberry or small plum, and has somewhat the flavor of the former. The foliage is deep green tinted with red and is very ornamental." (Johnson.)

Actinidia strigosa (Dilleniaceae), 47633. From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. A shrubby climber, native of Sikkim, India, with white flowers in axillary cymes, and edible, ovoid, mucilaginous fruits a little more than an inch in length. (Adapted from Hooker, Flora of British India, vol. 1, p. 286.)

Amerimnon sissoo (Fabaceae), 47637. From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. "The timber is very valuable, and is one of the numerous kinds which are known in the timber trade as rosewood. The heartwood is brownish, and it possesses great strength and elasticity. It is also heavy, its weight being about 50 lbs. to the cubic foot. The wood is used for all kinds of joinery and cabinet work, carving, building material, gun carriages, etc. It requires a tropical or subtropical temperature." (Gardeners' Chronicle, Jan. 31, 1914.)

Anemone vitifolia (Ranunculaceae), 47639 From Darjeeling, India. A collection of seeds presented by

Mr. G. H. Cave, director, Lloyd Botanic Garden. This Himalayan plant resembles in many respects the well-known Japanese anemone. The woolly foliage, however, is thicker and larger. The large flowers are pure white, and are produced very freely during the summer months. This plant is not quite so hardy as its Japanese relative. (Adapted from Gardeners' Chronicle, Feb. 24, 1917, p. 88.)

Arundinella hispida (Poaceae), 47641. **Grass.** From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. A perennial grass, with a stout, hard, creeping rootstock, and with a simple or branched stem from 1 to 5 feet in length. The leaves are narrow or broad and from 6 to 12 inches long, and the panicles are 4 to 18 inches in length. This grass is abundant throughout the hilly parts of India, and is distributed through the East Indies, South Africa, Australia, and tropical America. In São Paulo, Brazil, it is considered a good forage plant for dry lands. (Adapted from Correa, Flora do Brazil, p. 128; and Hooker, Flora of British India, vol. 7, pp. 73, 74.)

Berberis insignis (Berberidaceae), 47645. **Barberry.** From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. "This magnificent species forms a large bush, with deep green leaves 7 inches long, and bunches of yellow flowers." (Hooker, Himalayan Journals, vol. 1, p. 340, 1855.)

Bucklandia populnea (Hamamelidaceae), 47649. From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. A large evergreen tree, up to 80 feet in height, native to the eastern Himalayas at altitudes of 3,000 to 8,000 feet. The wood is grayish brown, close grained, and durable, and is very much used in Darjeeling for planking and for doors and window frames. (Adapted from Watt, Dictionary of the Economic Products of India, vol. 1, p. 545.)

Buddleia asiatica (Loganiaceae), 47650. From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Gardens. A graceful, large shrub or small tree, common throughout India and the Malay Peninsula, ascending to 6,000 feet



**A PEAR THAT GIVES SOME PROMISE OF RESISTANCE TO BLIGHT.
(PYRUS CALLERYANA. SEE S. P. I. NO. 45687.)**

While no pear has as yet been found thoroughly resistant to pear blight, strains of this remarkable Chinese species are showing great promise. This fact, coupled with the unusual adaptability to habitat already shown, makes this pear of great interest to growers. (Photographed by F. N. Meyer at Koomooshu, Hupeh, China, April 4, 1917; P13269FS.)



A DROUGHT-RESISTANT PEAR STOCK FROM CHINA. (PYRUS CALLERYANA. SEE S. P. I. NO. 45687.)

Dwarf wild plants thriving in sterile, decomposed, porphyritic rock on a greatly eroded mountain top in central China. This photograph, compared with the next, shows the widely different conditions to which this pear adapts itself. (Photographed by F. N. Meyer at Nanchangyen, Hupeh, China, March 31, 1917; P13267FS.)

in the Nilghiri Hills. The lanceolate leaves are 4 to 8 inches long, and the small, white, sweet-scented flowers are borne in long, slender, spikelike racemes. This plant flowers continuously for three months in India. (Adapted from Curtis's Botanical Magazine, pl. 6323.)

Caryocar sp. (Caryocaraceae), 47587. From Colombia. Seeds collected by Mr. Alfred Lenz, Flushing, Long Island. "This genus yields the souari nut, sometimes exported from South America to Europe. There are several species which produce edible nuts. Probably the only section of the United States in which they can be planted with reasonable hopes of success is extreme south Florida." (Popenoe.)

Coffea bengalensis (Rubiaceae), 47661. From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. This shrub, which is a close relative of the plant which furnishes the coffee of commerce, is a native of India, and is remarkable for the number and beauty of its flowers. These flowers, which are large and white, are borne singly or in pairs at the ends of the branches. (Adapted from Curtis's Botanical Magazine, pl. 4917.)

Coix lacryma-jobi (Poaceae), 47617. **Job's-tears.** From Rio de Janeiro, Brazil. Seeds presented by Mr. T. R. Day, through Mr. Augustus I. Hasskarl, American vice consul, Rio de Janeiro. "'Lgrimas de Nossa Senhora' (Tears of Our Lady). I found this plant growing in a natural state in Brazil and have had it under experiment for about three years at one of the Leopoldina Railway Company's Experiment Stations. It is a very vigorous grower, and produces under almost any conditions here great crops of excellent forage. It reaches a height of 10 feet or over, and a single plant often produces 40 to 50 shoots. The yield in green forage under favorable conditions runs very high, from 10 to even 20 tons to the acre, and the yield of grain is also very heavy. The seeds are very hard and require crushing or grinding before feeding if allowed to mature. But I am of the opinion that the best results may be obtained from the use of the plant for soiling, cutting four or five times during the year. The plant stools well, continually sending up new shoots or stems, thereby renewing itself, and lasting here for some years. In temperate climates it would be an annual, as in the case of teosinte and maize. Its favorite habitat is

a low, moist, or even marshy soil, but it will grow successfully in dry soil also. I have seen it growing luxuriantly in very wet localities, even in water." (Day.)

Cotoneaster frigida (Malaceae), 47664. From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. "Of the stronger-growing Cotoneasters this is perhaps the best, for it grows into a very large bush, or sometimes a small tree, and rarely fails to fruit freely, the branches from late September onwards being laden with large clusters of bright red fruits. Moreover, it is more attractive when in flower than many of the Cotoneasters, the flowers being creamy white and produced in large cymes. Although a deciduous species, the leaves are often retained until well into winter, and after a mild autumn it not infrequently happens that many leaves are left until January. The fruit also remains until well into the New Year if not troubled by birds. It is a Himalayan plant, and succeeds in a light and sunny position in good loamy soil." (The Garden, Nov. 18, 1916.)

Cotoneaster rotundifolia (Malaceae), 47665. From Darjeeling, India. A collection of seeds presented by Mr. G. H. Cave, director, Lloyd Botanic Garden. One desirable feature of this Cotoneaster used as an ornamental plant is that the berries are less attractive to birds than those of any of the other kinds. This is a very important point, as some members of the genus are very quickly robbed of their beauty after the berries color. *C. rotundifolia* is one of the Himalayan species, several of which run into each other by almost imperceptible gradations, so that, as might be expected, a certain amount of confusion attends their nomenclature. The true *C. rotundifolia* is a beautiful shrub, usually forming a rather spreading bush 4 or 5 feet in height, clothed with small, dark green, roundish leaves, many of which are retained throughout the winter, unless the weather is particularly severe. The berries, which are about the size of peas, are very freely borne, and, being of a deep scarlet hue when ripe, the bush makes a goodly show, and, as above stated, the birds leave it alone until the last. (Adapted from Journal of Horticulture and Home Farmer, Dec. 18, 1913.)

Dioscorea sp. (Dioscoreaceae), 47564. **Yam.** From Bahia, Brazil. Tubers presented by Mr. V. A. Argollo Ferrão. "'Inhame figado de piru,' or 'caissara' [turkey-liver yam, - on account of the shape of the aerial tubers]. This very interesting inhame is cultivated here in some localities but is rare and is not found in the markets. The tubercles are borne on the vine. I had a few last year and planted them in December, when they were starting. I am now (April 28) picking the crop. The tubercles I have eaten were boiled and I found them very good. I think it is a plant worth propagating, for it gives an excellent substitute for the potato, is productive, and the tubercles keep for several months without deterioration." (Argollo.)

Dolichos lablab (Fabaceae), 47568. **Bonavist bean.** From St. Vincent, B. W. I. Seeds presented by Prof. S. C. Harland, assistant for cotton research, Agricultural Experiment Station. "'St. Vincent Bush.' I discovered this type in a peasant's holding in St. Vincent in the spring of 1915 and found that it bred true when put into pedigree culture. Under cultivation it produces a wiry bush of from $1\frac{1}{2}$ to 2 feet in height, and bears a heavy crop when environmental conditions are favorable. As a cover crop for orchards in Florida I think it is worth a trial. With me the plants of the bush *Dolichos* always flower when 5 weeks old and ripe pods are produced at 8 weeks. Often a second crop of pods is produced. The beans are quite palatable, though they are inferior to Lima beans. I should mention that in the course of my inheritance studies on *Dolichos*, I have established that the bush form behaves as a simple Mendelian recessive to the climbing form. In a cross between 'St. Vincent Bush' (white) and 'Purple Soudan' climber, I have isolated pure bush types of varying vegetative habits. Some are much more vigorous than the original bush parent. I have also succeeded in isolating a bush form of 'Vilmorin's Stringless,' by crossing 'Stringless,' with the native bush." (Harland.)

Hymenaea courbaril (Caesalpinjiaceae), 47559. **Courbaril.** From Puerto Cabello, Carabobo, Venezuela. Fruits presented by Mr. J. G. Meyer, American vice consul. This important tree flourishes throughout the tropical parts of the western hemisphere. The pods contain an edible substance surrounding the seeds, and the wood is fine grained, hard and heavy. The principal use of the tree is in furnishing South American copal, - a

gum which exudes from wounds in the bark [and is also said to exude naturally from the roots and lower part of the trunk]. Some of the trees in the Brazilian forest are 6 feet in diameter above the buttresses and are estimated to be more than 1,000 years old. These trees produce large quantities of gum during their lifetime and the spot in which one has stood often yields 5 to 10 barrels of the best gum, which is used in the manufacture of varnishes. (Adapted from Bulletin of the Pan-American Union, October, 1916.)

Ipomoea cairica (Convolvulaceae), 47532. **Morning-glory.** From Zamboanga, P. I. Seeds presented by Mr. P. J. Wester, agricultural advisor. "Seeds of a white-flowered variety of *I. cairica*, extremely attractive and floriferous. Unlike most plants of this family, *I. cairica* is ever-blooming. The mauve-colored variety is the most popular climber in the Philippines and very rarely seeds, being propagated by cuttings. The plant from which these seeds were obtained is the only one with white flowers I have seen." (Wester.)

Jubaea chilensis (Phoenicaceae), 47578. **Palm.** From Miami, Fla. Plants grown at the Plant Introduction Field Station at Miami. "This is the palm from which the palm honey of Chile is made. This syrup is the most delicious I have ever tasted. It is superior, in my estimation, to maple syrup, being milder, and not cloying the palate as the latter does. In forty years the trees will be ready to tap for the sap from which this syrup is made. It is a very ornamental palm but a slow grower. It thrives on poor, very dry soils and requires very little water. Hitherto palms have been felled but they can be tapped, I am assured, just as maple trees are tapped." (Fairchild.)

Kokia rockii (Malvaceae), 47561. From Honolulu, Hawaii. Presented by Mr. J. F. Rock. "Seeds of a new variety of *K. rockii*, from the island of Kauai, discovered by Mr. A. Knudsen. There is only one specimen of the tree; it grows in the very dry region of Kauai, several miles from Mana, in Koaloha canyon, — on the edge of a cliff, which saved it from destruction by cattle. I think the discovery of this form is one of the most noteworthy since the days of Hillebrand." (Rock.)

Lycopersicon esculentum (Solanaceae), 47526. **Tomato.** From Naples, Italy. Presented by the Museo Commerciale

e Coloniale of Naples, through Mr. B. Harvey Carroll, Jr., American consul. "Tomato seed of the variety 'fiascone' or 'fiaschetti' of which the English translation would be 'little flagons' on account of the shape of the tomato. This is the type of tomato most largely grown in this consular district and most used for canning and for making tomato paste." (Carroll.)

Meryta sinclairii (Araliaceae), 47570. From Auckland, New Zealand. Seeds presented by Mr. James W. Poynton. "Native name 'puka.' The meryta has large leaves, and is rather a striking-looking small tree, much grown in gardens for ornament. For a time it was believed to be the rarest tree in the world, - only one plant being known. One of our early botanists saw a tree near a large native camp, but the Maoris declared it was 'tabu' and forbade him under penalty of death to touch it. He reported its discovery and described it as accurately as he could. No other naturalist had ever seen such a tree in New Zealand and much interest was aroused by his report. Twelve years afterward he returned to the place and found the camp deserted; but the tree was still there. He got some leaves and flowers and sent them to the eminent botanist, Sinclair, who classified it, and it is now named after him. Subsequently 27 plants were found on some islands in the Hawaki Gulf near Auckland and from them seeds were obtained for distribution. The plants are male and female." (Poynton.)

Metrosideros tomentosa (Myrtaceae), 47571. From Auckland, New Zealand. Seeds presented by Mr. James W. Poynton. "The Christmas tree of our early settlers; native name 'pohutukawa.' It comes into bloom mostly during Christmas week (midsummer here). The flowers are deep red and the tree is very pretty when in flower. It grows well by the seaside, gives good shelter, and endures salt spray splendidly. The wood is hard and durable but the tree does not grow straight, being bent at the branches. For this reason it was much sought after for knees for boat building." (Poynton.)

Ochroma lagopus (Bombacaceae), 47593. **Balsa wood.** From Santiago de las Vegas, Cuba. Seeds presented by Mr. M. Calvino, director, Agricultural Experiment Station. A wild tree, rather abundant, growing about 40 feet high and a foot or more in diameter. The wood is white, stained with red, luminous in aspect, and sometimes silky. It is very porous, the lightest of

all woods, lighter even than cork. In Trinidad and other places it forms an article of commerce with fishermen, who use it in place of cork on their nets. (Adapted from Cook and Collins, Economic Plants of Porto Rico, p. 205.)

Phyllocladus trichomanoides (Taxaceae), 47573. From Auckland, New Zealand. Seeds presented by Mr. James W. Poynton. "Cones of the remarkable 'celery-topped pine'; native name 'tanekaha.' The bark contains two valuable red dyes and about 22 per cent of tannin. When about 18 months old the leaves become aborted and the leafstalks expand, become leaflike, and take on all the functions of leaves, as do some of the acacias, but I believe the 'tanekaha' is the only pine with this habit." (Poynton.)

Prunus serrulata (Amygdalaceae), 47567. **Flowering cherry.** From Chevy Chase, Md. Seeds collected by Dr. David Fairchild at his home, "In The Woods." "'Daizen.' Seeds from a tree at the southeast corner of my study. This tree and, in fact, all the other 'Daizen' trees on my place, have characterized themselves by their regular fruiting habit, the cherry fragrance of their single white flowers, and the vigor of their trunks and freedom from suckers. They have been particularly free from disease and have struck me as promising for stock purposes. These trees were bought originally from the Yokohama Nursery Co., Yokohama, Japan, in the spring of 1906, and are now 13 years old and 20 feet or so high with trunks about 6 inches in diameter. It is possible of course that the plants from these seeds will show the result of crossing with other of the varieties such as 'Murasaki,' 'Jobeni,' and 'Naden,' with which they are closely planted." (Fairchild.)

The tree has made thrifty growth at Boise, Idaho, and at San Jose and Kerman, Calif.

Prunus subhirtella autumnalis (Amygdalaceae), 47534. From Chevy Chase, Md. Seeds collected by Dr. David Fairchild, at his home, "In The Woods." "Seeds from a tree of the 'October-blooming' Japanese flowering cherry imported from the Yokohama Nursery Co., Yokohama, Japan, in 1906. I suggest it as a stock for commercial cherries because of its unusual vigor, the fact that its trunk has been very free from disease, that it does not sucker, that its seedlings are not subject to the usual leaf blight (*Cylindrosporium padi*),

and that the seeds are regularly produced. The flowers are single and are produced both in autumn (October) and spring (about April first)." (Fairchild.)

Prunus subhirtella pendula (Amygdalaceae), 47535. **Rose-bud cherry.** From Chevy Chase, Md. Seeds collected by Dr. David Fairchild, at his home, "In The Woods". "Drooping Japanese cherry seed gathered from trees imported in 1906 from the Yokohama Nursery Co., Yokohama, Japan. The unusual vigor of these drooping cherry trees, the fact that they belong to a long-lived species which in Japan grows to be 300 years old, combined with the facts that the seedlings are free from the *Cylindrosporum padi* disease which attacks the Mazzard seedlings, that their trunks are vigorous and are free from diseases such as gummosis, and also that the trees bear abundant crops of seeds would seem to indicate that it is worth testing as a stock for our cultivated cherries. I have grown seedlings, and find that they are quite uniform though some appear to have the drooping habit whereas others are upright in growth. No leaf blight has been observed among them. Seed gathered June 5 or 6, 1919." (Fairchild.)

Saguerus pinnatus (Phoenicaceae), 47527. **Sugar palm.** From Mayaguez, Porto Rico. Seeds presented by Mr. D. W. May, Porto Rico Agricultural Experiment Station. "The 'gomuti' palm is one of the most useful of palms, and occurs in a wild state throughout the islands of the Indian Archipelago, but is more common in the interior, principally in the hilly districts, than on the sea coast; it is also very generally cultivated by the various people who inhabit that region. It is indigenous to Sonda and the Philippines, and is cultivated generally in tropical Asia. This palm attains a height of 30 to 40 feet, and besides its saccharine sap furnishes a highly valuable, black, fibrous substance, Ejoo fiber, superior in quality, cheapness, and durability to that obtained from the husk of the coconut, and renowned for its power of resisting moisture. It is used by the natives of the Indian islands for every purpose of cordage and is known as 'tsongli.' Underneath this material is found a substance of a soft, gossamer-like texture, which is imported into China. It is applied as oakum in caulking the seams of ships, and more generally as tinder for kindling fire, - it is for the latter purpose that it is chiefly in demand among the Chinese. In Malacca, the 'gomuti', there termed 'kabong', is cultivated principally for the juice which

it yields for the manufacture of sugar." (Simmonds, Tropical Agriculture, p. 252.)

Trifolium panormitanum (Fabaceae), 47597. **Palermo clover.** From Algiers, Algeria. Seeds presented by Dr. L. Trabut. "A clover, closely resembling *T. alexandrinum*, which grows vigorously in damp places along the coast. It is easily distinguished by its dark green color and its larger leaves. This clover makes a good forage but does not as yet lend itself readily to cultivation. Hybridization experiments with berseem are being carried on. This **Palermo clover** shows local variations which should be studied." (Trabut.)

Notes on Behavior of Previous Introductions.

A letter dated June 2, 1919, from Mr. F. T. Ramsey, of Austin, Texas, states the following:

"Late in the spring of 1916, we received from your Department 10 trees of the Methley plum (*Prunus salicina x cerasifera myrobalana*), S. P. I. No. 41652, from Natal. They were planted April 20, 1916, so late that they barely lived through that summer; and last year and the year before were the driest ever known in this country. But today the 10 trees are living and have a fine crop of red-fleshed, delicious fruit. We have tested, on our own place, several hundred varieties of plums and have larger ones ripening now, but this one probably 'takes the cake' for quality of texture and flavor among the very early plums. The trees are ideal in appearance, outline, and vigor. The fruit is borne largely on the old limbs, so that the young limbs do not break off easily. Jam or jelly made from these plums will equal in brilliancy, or color, that from either Satsuma or Sultan. Sultan has proved to have a weak constitution in our climate, and Satsuma does not come into bearing at as early an age, nor does it bear as profusely, as the Methley plum. Satsuma is of little, if any, better quality, although it ripens at least a month later."

Mr. Rolla Meyer, of Horse Shoe Bend, Idaho, makes the following report, April 21, 1919:

Ulmus pumila (S. P. I. No. 22975) is a particularly lovely tree; mine, received in 1917, is now 14 feet high, 2½ inches in diameter, with a beautiful frondlike system of branches. *Acer truncatum* (S. P. I. No. 18578) stated to be 'half-hardy in Ottawa,' is

hardy here, and beautiful, but, so far, rather shrubby. *Sophora davidii* (S. P. I. No. 21967) is interesting as material for hedges and bee pasture. The ends of some of the fine twigs die back over winter, for a few inches, somewhat like some standard nursery varieties of Russian mulberries; but it goes ahead every spring. The following are hardy here and doing well: *Populus simonii*, 22363; *Juglans regia*, 44200; *Diospyros lotus*, 27512; *Lonicera* sp., 39697; *Buddleia davidii*, 43677; *Elaeagnus angustifolia*, 28806; *Cotoneaster rotundifolia*, 32937, and *C. integerrima*, 33156, are hardy, and the leaves persist over winter."

The following introduction was received from the Arnold Arboretum, Jamaica Plain, Mass., November 16, 1917:

Pyrus calleryana (S. P. I. No. 45687) is a widely distributed species and according to Wilson is common in western Hupeh from river level up to 1,500 meters (4,900 ft.) altitude. It has comparatively small, glabrous, crenate leaves, and small flowers with 2, rarely 3, styles. The fruit is about 1 to 1.4 centimeters (2/5 to 1/2 in.) in diameter. (Adapted from *Plantae Wilsonianae*, vol. 2, part 2, p. 264.)

For previous introduction and description see S. P. I. No. 45592, Plant Immigrant Bulletin No. 142, February, 1918, p. 1279.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION
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